

IN THE CLAIMS:

Claims 1-21 (Cancelled).

Please add the following new claims:

22. (New) A method for reducing device discovery delays in frequency hopping based ad-hoc networks, said method comprising:

periodically interrupting an activity being executed by a device to scan, for a pre-determined time period, for inquiry messages from other devices irrespective of which state of activity said other devices are in between inquiry scans of said other devices, wherein said periodic interruption of an activity occurs at least once every periodic cycle, and wherein a scanning frequency of said inquiry scans changes every said periodic cycle;

returning to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network when said devices to scan are not found, wherein said random time period to continue said interrupting activity, before processing said inquiry message received from another device, is constrained to be less than or equal to half of said periodic cycle, and wherein receipt of said inquiry message from said another device must occur in a time period equal to no greater than twice said periodic cycle for any starting said scanning frequency; and returning to continue said activity on expiry of said pre-determined time period when said devices to scan are found.

23. (New) The method of claim 22, wherein said pre-determined time period for scanning is reduced by the reception, by said device, of a pre-determined number of inquiry messages from

other devices.

24. (New) The method of claim 22, wherein said interrupting activity is one of device discovery.
25. (New) The method of claim 22, wherein said frequency hopping based ad-hoc network is implemented under the Bluetooth™ defacto standard.
26. (New) The method of claim 25, wherein said interrupting activity is one of device discovery.
27. (New) The method of claim 25, wherein said periodic interruption of an activity occurs at least once every 2.56 seconds.
28. (New) The method of claim 27, wherein said random time period to continue said interrupting activity, before processing said inquiry message received from another device, is constrained to be less than or equal to 1.28 seconds.
29. (New) A device for use in frequency hopping based ad-hoc networks including:
a processor adapted to periodically interrupt an activity being executed by a device to scan, for a pre-determined time period, for inquiry messages from other devices irrespective of which state of activity said other devices are in between inquiry scans of said other devices, wherein said periodic interruption of an activity occurs at least once every periodic cycle, and

wherein a scanning frequency of said inquiry scans changes every said periodic cycle;

wherein said processor is adapted to return to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network when said devices to scan are not found, wherein said random time period to continue said interrupting activity, before processing said inquiry message received from another device, is constrained to be less than or equal to half of said periodic cycle, and wherein receipt of said inquiry message from said another device must occur in a time period equal to no greater than twice said periodic cycle for any starting said scanning frequency; and

wherein said processor is adapted to return to continue said activity on expiry of said pre-determined time period when said devices to scan are found.

30. (New) The device of claim 29, wherein said pre-determined time period for scanning is reduced by the reception, by said device, of a pre-determined number of inquiry messages from other devices.

31. (New) The device of claim 29, wherein said interrupting activity is one of device discovery.

32. (New) The device of claim 29, wherein said frequency hopping based ad-hoc network is implemented under the Bluetooth™ defacto standard.

33. (New) The device of claim 32, wherein said interrupting activity is one of device discovery.
34. (New) The device of claim 32, wherein said periodic interruption of an activity occurs at least once every 2.56 seconds.
35. (New) The device of claim 34, wherein said random time period to continue said interrupting activity, before processing said inquiry message received from another device, is constrained to be less than or equal to 1.28 seconds.
36. (New) A computer program product incorporating a computer readable medium having a computer program recorded therein for implementing a method for reducing device discovery delays in frequency hopping based ad-hoc networks, said method comprising:
periodically interrupting an activity being executed by a device to scan, for a pre-determined time period, for inquiry messages from other devices irrespective of which state of activity said other devices are in between inquiry scans of said other devices, wherein said periodic interruption of an activity occurs at least once every periodic cycle, and wherein a scanning frequency of said inquiry scans changes every said periodic cycle;
returning to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network when said devices to scan are not found, wherein said random time period to continue said interrupting activity, before processing said inquiry message

received from another device, is constrained to be less than or equal to half of said periodic cycle, and wherein receipt of said inquiry message from said another device must occur in a time period equal to no greater than twice said periodic cycle for any starting said scanning frequency; and returning to continue said activity on expiry of said pre-determined time period when said devices to scan are found.

37. (New) The computer program product of claim 36, wherein said pre-determined time period for scanning is reduced by the reception, by said device, of a pre-determined number of inquiry messages from other devices.

38. (New) The computer program product of claim 36, wherein said interrupting activity is one of device discovery.

39. (New) The computer program product of claim 36, wherein said frequency hopping based ad-hoc network is implemented under the Bluetooth™ defacto standard.

40. (New) The computer program product of claim 39, wherein said interrupting activity is one of device discovery.

41. (New) The computer program product of claim 39, wherein said periodic interruption of an activity occurs at least once every 2.56 seconds.

42. (New) The computer program product of claim 41, wherein said random time period to

continue said interrupting activity, before processing said inquiry message received from another device, is constrained to be less than or equal to 1.28 seconds.